TARGET AUDIENCE: BCEs, all environmental organizations, LGMFS Superintendents, and Ops Crew Chiefs

AFCESA A-GRAM
AIR FORCE CIVIL ENGINEER SUPPORT AGENCY

99-15 **MARCH 1999**

AIRCRAFT WASHWATER TREATMENT AND DISPOSAL

SYNOPSIS:

AFCESA has published an Engineering Technical Letter (ETL 99-1) on this topic to assist project managers with decisions on disposal of aircraft washwater. The process is complicated by the number of organizations involved with washracks, pressure from treatment equipment vendors, and environmental pollution prevention desires to treat and recycle. Disposal options range from simply discharging the wastewater to the sanitary system to recycling or hauling the wastewater off site. The ETL provides guidelines, criteria, and background to help avoid problems frequently encountered with washrack treatment systems.

WHAT YOU NEED TO KNOW:

- The volume of wastewater generated and the rate of generation are important to properly size any storage, treatment and discharge piping. The washing process, type of aircraft, and washing equipment used will impact flow rates and wastewater characteristics.
- Appropriate treatment and disposal require a thorough knowledge of local, state, and federal environmental regulations and requirements.
- The first choice is to see if the process can be modified in some way to eliminate or minimize the need for treatment.
- If wastewater is to be discharged to the sanitary system there may be discharge limits to be met that may require some form of pretreatment.
- If wastewater is to be recycled it will require that water quality standards, spelled out in the ETL, be achieved and maintained by the recycle treatment system.
- If pretreatment or recycling is required, monitoring of water quality parameters will also be required.
- Treatment capacities and appropriate storage, along with associated life cycle costs, need to be thoroughly understood to develop the most **cost-effective** treatment solution. Recycling is rarely if ever the most cost-effective solution. At many locations, application of pollution prevention techniques will be sufficient to allow discharge of aircraft washwater directly to the sanitary system for treatment at the wastewater treatment plant.

KEYS TO PROJECT SUCCESS:

- Having a good treatment performance record, pilot testing or demonstration, and a performance warranty in hand help protect against equipment literature that may be misleading.
- Initial training and O&M documentation must be provided along with the equipment.
- O&M responsibility for equip-ment must be clearly assigned and supported.

SUMMARY:

This ETL will help you understand the problem and collect the necessary information to make correct decisions and get the desired results. Each step in the process is equally important. The approach in the ETL has been coordinated with the environmental and logistics communities. ETL 99-1 can guide you through the process and is available in the AFCESA library on our website at http://www.afcesa.af.mil/. It will also be available in the next update of the Construction Criteria Base information system available in all CE units.

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